

In the Abstract:

Kindly enter and approve the abstract attached hereto.

--Sharps are introduced into an apparatus for contacting the sharps with an electrolyte containing the oxidized form of one or more reversible redox couples, at least one of which is produced electrochemically by anodic oxidation at the anode of an electrochemical cell. The oxidized forms of any other redox couples present are produced either by similar anodic oxidation or reaction with the oxidized form of other redox couples present and capable of affecting the required redox reaction. The oxidized species of the redox couples oxidize sharps and the biological waste on the sharps and are themselves converted to their reduced form, whereupon they are reoxidized by either of the aforementioned mechanisms and the redox cycle continues until all oxidizable waste species, including intermediate reaction products, have undergone the desired degree of oxidation. The entire process takes place at temperatures between ambient and approximately 100°C. The oxidation process will be enhanced by the addition of reaction enhancements, such as: ultrasonic energy and /or ultraviolet radiation.--